

### Abstract

The present invention relates to nucleic acids which code for the non-selective cation channel OTRPC4 as well as polypeptides which are coded by said nucleic acids. The invention further relates to hosts or host cells which express said polypeptide and processes for finding blockers, activators and modulators of said OTRPC4 cation channels. The invention includes blockers, activators and modulators of said OTRPC4 cation channels and pharmaceutical compositions containing said blockers, activators and modulators. In addition, the invention relates to non-human mammals which contain OTRPC4 either as a transgene, an inactivated gene (knock-out) or modified gene (knock-in).